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ABSTRACT

Two multiple regression analyses were conducted by Kapiolani Community College (KCC) to determine if selected characteristics of first-time students could be used in a predictive equation to identify potential dropouts. Correlations were determined between two dependent and 21 independent variables. The dependent variables were the achievement of a first-semester grade point average (GPA) of 2.0 or above and re-enrollment for a second semester. The independent variables were: (1) enrollment status; (2) degree objective; (3-4) math and English placement test scores; (5) sex; (6) age; (7) marital status; (8) high school GPA; (9) employment status; (10-13) student perceptions of their reading, writing, math, and study skills; (14) college goals; (15) reason for selecting KCC; (16-17) existence of financial worry and career plans; and (18-21) student perceptions of their chances of attending class, achieving a B average, being satisfied with KCC, and graduating. The first regression analysis used data for Fall 1980 entering students and results were separately analyzed for liberal arts and vocational students. In the second analysis, data were combined for students entering in Fall 1979 or Fall 1980. To control for student diversity in this sample, separate results were analyzed for two groups of liberal arts students and eight groups of vocational students. The study report details findings and examines the reliability of the correlations. (JP)

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ED200283

EARLY IDENTIFICATION OF THE POTENTIAL DROPOUT
AN EXPLORATORY STUDY BASED ON
FALL 1979 AND FALL 1980 NEW STUDENTS

Report 12

Student Flow Program

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March 1981

Office of the Provost
Kapiolani Community College
University of Hawaii
Honolulu, Hawaii

JC 810 204

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A. Introduction

Based upon the 1975 student flow project, and with the addition of data from the Entering Student Survey, Kapiolani Community College undertook a multiple regression analysis to explore whether our data on Fall 1979 new students could provide a useful means of identifying the potential dropout at the beginning of the semester. The results of that effort are presented in Report 6 of the Student Flow Program as is the following conclusion:

> Since the R^2 values for predicting both second-semester enrollment and first-semester GPA of 2.0 or above, for both liberal arts and vocational education students, are low (below 10 percent of the variance for the first dependent variable and below 20 percent for the second), we are recommending that the equations not be applied to the Fall 1980 new students. Our multiple regression analysis adds another footnote in the literature on the difficulties of predicting human behavior, based on rather limited data. We have learned that the data we have are not enough to predict, with sufficient accuracy, whether new students in the liberal arts and in vocational education will return for a second semester or have a passing GPA at the end of their first semester. (p. 5)

In Report 6, we also recommend that:

> Similar multiple regression analyses should be conducted on the Fall 1980 new students and if the results are no different, the approach should be undertaken for each of the following program groupings: liberal arts, secretarial science, accounting, data processing, merchandising, food services, hotel operations, health services, and legal assisting, if the sample size is close to 200 or more. In order to increase sample size, data for Fall 1979 and Fall 1980 new students should be combined. This approach, based on greater homogeneity of students in the vocational programs may be more productive, but the diversity of students in the liberal arts program remains a challenge. Perhaps item 6 in the Entering Student Survey, which deals with the "highest degree" students plan to obtain, might be used to subdivide the liberal arts group into two: those with bachelor's or higher degrees in mind and those with lower degree aspirations. This should be considered in planning regression analysis for the Fall 1980 entering group. (pp. 5-6)

This report presents our findings resulting from the multiple regression analysis we conducted in accordance with the preceding recommendations.

B. Plan for Multiple Regression Analysis

We planned:

- to limit our analysis to Fall 1980 entering students who were <u>new</u> to higher education
- to develop separate equations for liberal arts and vocational education students
- to develop separate equations for the following vocational programs if they had a sample size close to 200 or more majors by combining Fall 1979 and Fall 1980 data: accounting, data processing, secretarial science, food services, hotel operations, health services and legal assisting
- to develop separate equations for two sub-groups of liberal arts students: those whose educational aspirations included a bachelor's or higher degree and those with lower degree aspirations (response to item 6 of the Entering Student Survey)
- to develop equations for two dependent variables:
  - second-semester (Spring 1981) enrollment (yes = 2; no = 1)
  - first-semester GPA of 2.0 or above (yes = 2; no = 1)

- to have two sets of independent variables:
  - student characteristics in the college's information system:

Characteristic	
Enrollment Status	full-time = 2; part-time = 1
Educational Objective	associate = 2; certificate = 1
English Placement	Eng 100 or +100 = 5; Eng 22/50 = 4; Eng 21 = 3; Eng 7/10 = 2; ELI 004 = 1
Math Placement	Math 140 = 6; Math 130, 115, & QM 121 = 5; Math 27, 100, & ICS 112 = 4; Math 25 = 3; Math 21 = 2; Math 01 = 1
Sex	male = 2; female = 1
Entering Age	over 24 = 3; 19-24 = 2; below 19 = 1
Marital Status	married = 2; unmarried = 1

  - responses to selected items in the Entering Student Survey:

Item	Scoring
Average Gr in Hi Sch	A = 4; B = 3; C = 2; D = 1
Present Employment	yes = 2; no = 1
Previous Preparation:	
Reading Skills	very well = 3; adequately = 2; poor or not at all = 1
Writing Skills	Ditto
Math Skills	Ditto
Study Habits	Ditto

College Goals:	
Prepare for Career	yes = 2; no = 1
Get Degree/Cert.	Ditto
Satisfy Parents' Wishes	Ditto
College Selection:	
College has Courses	Ditto
Close/Conv. Location	Ditto
Financial Worry	no = 2; yes = 1
Career Plans	has plans = 2; no plans = 1
Very Good Chance that Student Will:	
Attend Classes	yes = 2; no = 1
Make B Average	Ditto
Be satisfied with KCC	Ditto
Get Degree from KCC	Ditto

- to have independent variables enter the regression analysis in a stepwise fashion[1] and to use SPSS (Statistical Package for the Social Sciences) in developing the equation

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[1]The stepwise regression procedure involves "the re-examination at every stage of the regression of the variables incorporated into the model in previous stages. A variable which may have been the best single variable to enter at an early stage may, at a later stage, be superfluous because of the relationships between it and other variables now in the regression. To check on this, the partial F criterion for each variable in the regression at any stage of calculation is evaluated and compared with a preselected percentage point of the appropriate F distribution. This provides a judgment on the contribution made by each variable as though it had been the most recent variable entered, irrespective of its actual point of entry into the model. Any variable which provides a nonsignificant contribution is removed from the model. The process is continued until no more variables will be admitted to the equation and no more are rejected." (N. R. Draper and H. Smith, Applied Regression Analysis [New York: John Wiley and Sons, Inc., 1966], p. 171.)

C. The Results

1. Fall 1980 New Students

We found the following multiple correlations between the independent and the two dependent variables, based on Fall 1980 new students:

	No. of Cases	Mult. R	R^2
LIBERAL ARTS STUDENTS			
1. Second-Semester Enrollment			
a. Characteristics Only	758	.3022	.0913
b. Chars. & Survey Responses	411	.3551	.1261
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	758	.2692	.0725
b. Chars. & Survey Responses	411	.4661	.2173
VOCATIONAL EDUCATION STUDENTS			
1. Second-Semester Enrollment			
a. Characteristics Only	761	.3500	.1225
b. Chars. & Survey Responses	456	.4421	.1955
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	761	.3087	.0953
b. Chars. & Survey Responses	456	.3718	.1382

R^2 values are provided because they reflect the "overall accuracy of the prediction equation," i.e., "the proportion of variation explained by the variables included in the regression equation."[2]

[2]Norman H. Nie, et al, SPSS: Statistical Package for the Social Sciences, Second edition (New York: McGraw-Hill Book Co., 1975), p. 331.

The following obserations are worthy of note:

- The R^2 values for the Fall 1980 group were higher than those for the Fall 1979 new students.
- The total group of new students had slightly lower R^2 values for second-semester enrollment, based on student characteristics, for both liberal arts and vocational education students, contrasted to the R^2 values for the sub-group that also responded to all items in the Entering Student Survey.
- The same is true for predicting first-semester GPA of 2.0 or above; the R^2 values are higher for the group that had data on survey responses among both liberal arts and vocational education students. This increase is especially great for liberal arts students.
- Based on characteristics and survey responses, the R^2 value for first-semester GPA (.2173) was higher than that for second-semester enrollment (.1261) for liberal arts students. The reverse was true for vocational education students (.1382 and .1955, respectively).

Summary tables on the results of the regression analysis are found in Appendices A (liberal arts) and B (vocational education) for both sets of independent variables and for both dependent variables.

These tables show that the simple r (correlation) values for each of the independent and dependent variables were low, generally below .20. However, among the independent variables, two usually had r values above .20 for both liberal arts and vocational education students: enrollment status (full-/part-time) and math placement level. Average high school grades and first-semester GPA had an r value of .30 for liberal arts students.

2. Fall 1979 and Fall 1980 Groups Combined

For further multiple regression analysis, we combined data on Fall 1979 and Fall 1980 new students who responded to the Entering Student Survey. We found that the following sub-groups had sample sizes close to 200 or more: (a) liberal arts majors with associate or lower degree aspirations, (b) liberal arts majors with bachelor's or higher degree aspirations, (c) secretarial science majors, (d) accounting and data processing majors, (e) food services majors and (f) hotel operations majors. Although the summary tables for these groups are not included in this report, interested personnel are encouraged to contact the institutional research unit.

Data on the two sub-groups of liberal arts majors are presented below:

	No. of Cases	Mult. R	R^2
LIBERAL ARTS: ASSOCIATE OR LOWER DEGREE			
1. Second-Semester Enrollment			
a. Characteristics Only	200	.3016	.0909
b. Chars. & Survey Responses	158	.4651	.2164
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	200	.2629	.0691
b. Chars. & Survey Responses	158	.5031	.2531
LIBERAL ARTS: BACHELOR'S OR HIGHER DEGREE			
1. Second-Semester Enrollment			
a. Characteristics Only	584	.2099	.0441
b. Chars. & Survey Responses	506	.3182	.1013
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	584	.2509	.0630
b. Chars. & Survey Responses	206	.4060	.1648

The following findings are worthy of note for the majors who had survey responses:

- R^2 values for liberal arts majors with associate or lower degree aspirations were higher than those of students with bachelor's or higher degree aspirations for both sets of independent and dependent variables.

- For liberal arts students with associate or lower degree aspirations, the highest multiple correlations were between characteristics/survey responses and (a) first-semester GPA of 2.0 or above (.5031) and (b) second-semester enrollment (.4651).

- For liberal arts majors with bachelor's or higher degree aspirations, the highest multiple correlations were between characteristics/survey responses and (a) first-semester GPA (.4060) and (b) second-semester enrollment (.3182).

- Simple r (correlation) values for each of the independent and dependent variables were low, generally below .20. The exceptions were:

  - majors with associate or lower degree aspirations:

    .28 2nd sem enroll & study habits
    .20 2nd sem enroll & full-/part-time status
    .33 1st sem GPA & average high school grade

  - majors with bachelor's or higher degree aspirations:

    .25 1st sem GPA & average high school grade

The following are data on the four sub-groups of vocational education majors:

	No. of Cases	Mult. R	R^2
SECRETARIAL SCIENCE			
1. Second-Semester Enrollment			
a. Characteristics Only	244	.4229	.1788
b. Chars. & Survey Responses	204	.5161	.2663
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	244	.3202	.1026
b. Chars. & Survey Responses	204	.4644	.2156
ACCOUNTING AND DATA PROCESSING			
1. Second-Semester Enrollment			
a. Characteristics Only	248	.3625	.1314
b. Chars. & Survey Responses	209	.4282	.1834
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	248	.3425	.1173
b. Chars. & Survey Responses	209	.4119	.1697
FOOD SERVICES			
1. Second-Semester Enrollment			
a. Characteristics Only	177	.3011	.0906
b. Chars. & Survey Responses	131	.5109	.2611
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	177	.3390	.1149
b. Chars. & Survey Responses	131	.4726	.2233
HOTEL OPERATIONS			
1. Second-Semester Enrollment			
a. Characteristics Only	194	.3266	.1067
b. Chars. & Survey Responses	156	.4593	.2110
2. First-Semester GPA of 2.0 or Above			
a. Characteristics Only	194	.2616	.0684
b. Chars. & Survey Responses	156	.5031	.2531

Among the major findings for students who responded to the Entering Student Survey are the following:

- secretarial science majors:
  - The highest multiple correlations were between characteristics/survey responses and (a) second-semester enrollment (.5161) and (b) first-semester GPA of 2.0 or above (.4644).
  - Simple r values for each of the independent and dependent variables were generally below .20 except for the following:

    .39 2nd sem enroll & full-/part-time status
    .28 2nd sem enroll & math placement level
    .28 1st sem GPA & math placement level
    .25 1st sem GPA & full-/part-time status

- accounting and data processing majors:
  - The highest multiple correlations were between characteristics/survey responses and (a) second-semester enrollment (.4282) and (b) first-semester GPA (.4119).
  - Simple r values for each of the independent and dependent variables were generally below .20 except for the following:

    .24 2nd sem enroll & math placement level
    .23 2nd sem enroll & full-/part-time status
    .22 1st sem GPA & math placement level

- food services majors:
  - The highest multiple correlations were between characteristics/survey responses and (a) second-semester enrollment (.5109) and (b) first-semester GPA (.4726).
  - Simple r values for each of the independent and dependent variables were generally below .20 except for the following:

    .21 2nd sem enroll & financial concerns
    .24 1st sem GPA & average high school grade
    .23 1st sem GPA & full-/part-time status
    .23 1st sem GPA & math placement level

- hotel operations majors:

  - The highest multiple correlations were between characteristics/survey responses and (a) second-semester enrollment (.4593) and (b) first-semester GPA (.5031).

  - Simple r values for each of the independent and dependent variables were generally below .20 except for the following:

    .33 2nd sem enroll & full-/part-time status
    .25 1st sem GPA & preparation in math skills
    .22 1st sem GPA & full-/part-time status

D. Concluding Comments

This analysis indicates:

- R^2 values for both sets of independent and dependent variables, for all sub-groups, were all below .30.

- higher multiple correlations between the characteristics/survey responses for first-semester GPA (than for second-semester enrollment) for both sub-groups of liberal arts majors and hotel operations majors. For the remaining three vocational education sub-groups (secretarial science, accounting/data processing, food services), the reverse is true; i.e., there is greater accuracy in predicting second-semester enrollment than first-semester GPA of 2.0 or above.

- simple correlations between each of the independent and dependent variables were generally below .20. The highest r values for second-semester enrollment were found for full-/part-time status for all majors except food services (financial concerns ranked higher) and liberal arts majors with bachelor's or higher degree aspirations (study habits). The highest r values for first-semester GPA of 2.0 or above were found for: (a) average high school grade for both sub-groups of liberal arts majors and food services majors, (b) math placement levels for secretarial science and accounting/data processing majors, and (c) preparation in math skills for hotel operations majors.

In view of the above findings, based on more extensive multiple regression analysis, we recommend that the data not be used for identifying potential dropouts, campus-wide. Personnel in individual programs who wish to apply these equations in an exploratory fashion should consult the staff in the institutional research unit.

Since we found that "academic" characteristics seem more highly correlated with GPA and progression than other characteristics, we have developed expectancy tables for various programs, based on the following: math placement levels, English placement levels, full-/part-time status, average high school grade and current work status. We hope that the departments will find these tables useful.

APPENDIX A

LIBERAL ARTS: SUMMARY TABLES ON REGRESSION ANALYSIS

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APPENDIX B

VOCATIONAL EDUCATION: SUMMARY TABLES ON REGRESSION ANALYSIS

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B-4. Vocational Education: First-Semester GPA of 2.0 or Above Characteristics and Survey Responses 18

TABLE A-1

Liberal Arts: Second Semester Enrollment Characteristics Only

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
MATH	MATH PLACEMENT	0.24063	0.05790	0.05790	0.24063	0.47223900-01	0.18476
ENRLST	ENROLLMENT STATUS	0.28402	0.08067	0.02277	0.20299	0.1243501	0.14381
SEX		0.29719	0.08831	0.00765	-0.07797	-0.76742690-01	-0.08489
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.30051	0.09030	0.00199	-0.12448	-0.21998180-01	-0.03548
ENG	ENGLISH PLACEMENT	0.30194	0.09117	0.00086	0.16864	0.86672010-02	0.03561
MARST	MARITAL STATUS	0.30221	0.09133	0.00016	-0.04650	-0.25951520-01	-0.01376
CONSTANT						1.567099	

TABLE A-2

Liberal Arts: Second Semester Enrollment Characteristics and Survey Responses

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
MATH	MATH PLACEMENT	0.23578	0.05559	0.05559	0.23578	0.41592880-01	0.16185
ENRLST	ENROLLMENT STATUS	0.27032	0.07307	0.01748	0.18056	0.97927340-01	0.11351
SEX		0.27753	0.08267	0.00960	-0.07171	-0.88174270-01	-0.09963
ITEM7	PRESENT EMPLOYMENT	0.28448	0.08969	0.00702	-0.07225	-0.80816060-01	-0.09228
ITEM10	AVERAGE GRADE IN HIGH SCHOOL	0.30371	0.09530	0.00561	0.11041	0.73186940-01	0.10645
ITEM11N3	WRITING SKILLS	0.31949	0.10232	0.00702	-0.08568	-0.1185067	-0.14494
ITEM11N2	READING SKILLS	0.32744	0.10722	0.00490	-0.01663	0.71597000-01	0.09201
ITEM9N2	MAKE B AVERAGE	0.33284	0.11079	0.00356	-0.02877	-0.43548760-01	-0.04994
ITEM1N10	SATISFY PARENT'S WISHES	0.33834	0.11427	0.00349	0.04814	0.91635920-01	0.09001
ITEM1N1	GET DEGREE-CERTIFICATE	0.34221	0.11711	0.00293	-0.03817	-0.36869430-01	-0.04282
ITEM9N3	SATISFIED WITH KCC	0.34541	0.11931	0.00220	-0.07831	-0.42265820-01	-0.04905
ENG	ENGLISH PLACEMENT	0.34744	0.12071	0.00140	0.16931	0.14909370-01	0.05734
ITEM3	FINANCIAL WORRY	0.34932	0.12202	0.00131	0.01598	0.26817260-01	0.02936
ITEM1N2	PREPARE FOR CAREER	0.35088	0.12312	0.00109	-0.04041	-0.39816910-01	-0.04195
ITEM11N1	MATH SKILLS	0.35239	0.12418	0.00106	0.10451	0.29273550-01	0.03861
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.35344	0.12524	0.00106	-0.11111	-0.21283220-01	-0.03334
ITEM5	CAREER PLANS	0.35465	0.12574	0.00050	-0.01617	-0.23522590-01	-0.02727
ITEM2N5	COLLEGE HAS COURSES	0.35489	0.12595	0.00017	-0.02557	0.13307320-01	0.01298
ITEM2N7	CLOSE & CONVENIENT	0.35503	0.12605	0.00010	-0.05503	-0.88575120-02	-0.01029
ITEM11N8	STUDY HABITS	0.35509	0.12608	0.00003	-0.01648	-0.51480120-02	-0.00650
CONSTANT						1.698207	

TABLE A-3

Liberal Arts: First-Semester GPA of 2.0 or Above Characteristics Only

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.18444	0.03402	0.03402	0.18444	0.1530257	0.15833
SEX		0.22560	0.05090	0.01688	-0.13777	-0.1457739	-0.14426
MATH	MATH PLACEMENT	0.25244	0.06372	0.01283	0.14148	0.3898763D-01	0.13647
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.26761	0.07161	0.00789	0.02516	0.5029613D-01	0.08123
MARST	MARITAL STATUS	0.26915	0.07244	0.00083	0.05024	0.6746960D-01	0.03107
ENG	ENGLISH PLACEMENT	0.26919	0.07246	0.00002	0.07923	0.1455795D-02	0.00535
CONSTANT						1.262263	

TABLE A-4

Liberal Arts: First-Semester GPA of 2.0 or Above Characteristics and Survey Responses

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ITEM10	AVERAGE GRADE IN HIGH-SCHOOL	0.30365	0.09220	0.09220	0.30365	0.1885332	0.23877
ENRLST	ENROLLMENT STATUS	0.35451	0.12568	0.03347	0.19322	0.1816414	0.18332
SEX		0.38425	0.14764	0.02197	-0.19452	-0.1813059	-0.17837
ITEM9N2	MAKE B AVERAGE	0.39802	0.15842	0.01077	0.17201	0.1309067	0.13071
ITEM11N3	WRITING SKILLS	0.40944	0.16764	0.00922	-0.02526	-0.6266864D-01	-0.06674
ITEM1N10	SATISFY PARENT'S WISHES	0.41810	0.17481	0.00716	-0.09418	-0.1215120	-0.09238
ITEM11N8	STUDY HABITS	0.42649	0.18189	0.00709	-0.00349	-0.8638352D-01	-0.09491
ITEM11N1	MATH SKILLS	0.43345	0.18783	0.00599	0.11160	0.5389545D-01	0.06190
ITEM2N7	CLOSE & CONVENIENT	0.43876	0.19251	0.00463	-0.08010	-0.8790124D-01	-0.08888
ITEM3	FINANCIAL WORRY	0.44397	0.19702	0.00451	0.02784	0.7088854D-01	0.06758
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.44893	0.20154	0.00451	0.02766	0.6332803D-01	0.08637
ITEM9N3	SATISFIED WITH KCC	0.45113	0.20352	0.00198	0.04898	0.7083231D-01	0.07153
MATH	MATH PLACEMENT	0.45777	0.20956	0.00421	0.12543	0.1902673D-01	0.06446
ITEM2N5	COLLEGE HAS COURSES	0.46133	0.21292	0.00327	-0.07001	-0.7147769D-01	-0.06071
ITEM1N1	GET DEGREE-CERTIFICATE	0.46342	0.21476	0.00194	0.04638	0.4513024D-01	0.04564
MARST	MARITAL STATUS	0.46431	0.21557	0.00101	0.01180	0.3008976D-01	0.03485
ITEM9N1	ATTEND CLASSES	0.46509	0.21631	0.00054	0.08986	0.4590947D-01	0.02592
ITEM5	CAREER PLANS	0.46543	0.21662	0.00031	-0.00175	-0.1890085D-01	-0.01908
ITEM9N4	GET DEGREE FROM KCC	0.46575	0.21692	0.00030	0.03313	-0.1903381D-01	-0.01821
ITEM7	PRESENT EMPLOYMENT	0.46596	0.21711	0.00019	0.02469	0.1462595D-01	0.01454
ENG	ENGLISH PLACEMENT	0.46609	0.21724	0.00013	0.08637	0.4839230D-02	0.01620
ITEM11N2	READING SKILLS	0.46612	0.21727	0.00003	-0.01091	-0.6318480D-02	-0.00707
CONSTANT						0.8386697	

TABLE B-1

Vocational Education: Second Semester Enrollment Characteristics Only

VARIABLE		SUMMARY TABLE					
		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.29043	0.09435	0.08435	0.29043	0.2068687	0.24188
MATH	MATH PLACEMENT	0.33790	0.11418	0.02983	-0.23726	0.48966450-01	0.17315
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.34806	0.12115	0.00697	-0.13926	-0.61553330-01	-0.10476
MARST	MARITAL STATUS	0.34945	0.12211	0.00096	-0.02398	0.24396000-01	0.03781
ENG	ENGLISH PLACEMENT	0.34994	0.12246	0.00034	0.13121	-0.54743800-02	-0.02154
SEX		0.35004	0.12253	0.00007	-0.03875	-0.81537330-02	-0.00863
CONSTANT						1.376939	

TABLE B-2

Vocational Education: Second Semester Enrollment Characteristics and Survey Responses

VARIABLE		SUMMARY TABLE					
		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.33524	0.11239	0.11239	0.33524	0.2171606	0.26812
MATH	MATH PLACEMENT	0.39707	0.15838	0.04599	0.29340	0.60781930-01	0.23202
ITEM3	FINANCIAL WORRY	0.40914	0.16658	0.00820	0.08371	0.86307630-01	0.09761
ITEM11N8	STUDY HABITS	0.41419	0.17152	0.00493	-0.03590	-0.10203910-01	-0.09085
ITEM10	AVERAGE GRADE IN HIGH SCHOOL	0.42132	0.17726	0.00573	0.12697	0.41384480-01	0.06100
ITEM9N2	MAKE B AVERAGE	0.42517	0.18077	0.00351	0.07967	0.60515830-01	0.07107
ITEM9N3	SATISFIED WITH KCC	0.42938	0.18351	0.00274	0.00563	-0.47211410-01	-0.05522
ITEM7	PRESENT EMPLOYMENT	0.43221	0.18663	0.00312	-0.06516	-0.51776650-01	-0.06090
ITEM11N1	MATH SKILLS	0.43456	0.18884	0.00221	0.13123	0.26261450-01	0.03432
ITEM1N1	GET DEGREE-CERTIFICATE	0.43608	0.19016	0.00133	0.04112	0.44367620-01	0.04848
EDOBJ	EDUCATIONAL OBJECTIVE	0.43742	0.19169	0.00152	0.08592	0.33680570-01	0.03588
MARST	MARITAL STATUS	0.43890	0.19272	0.00103	-0.06113	-0.25231490-01	-0.01703
ITEM2N5	COLLEGE HAS COURSES	0.43974	0.19337	0.00066	0.01057	-0.22819770-01	-0.02629
ENG	ENGLISH PLACEMENT	0.44029	0.19386	0.00049	0.10501	-0.87597940-02	-0.03511
SEX		0.44068	0.19420	0.00034	-0.02144	0.19980800-01	0.02115
ITEM11N3	WRITING SKILLS	0.44100	0.19449	0.00028	-0.00633	0.23596590-01	0.02917
ITEM11N2	READING SKILLS	0.44133	0.19477	0.00029	-0.02088	-0.16658770-01	-0.02128
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.44160	0.19501	0.00024	-0.10402	-0.10473420-01	-0.01777
ITEM2N7	CLOSE & CONVENIENT	0.44189	0.19526	0.00025	-0.04586	-0.16172790-01	-0.01676
ITEM9N1	ATTEND CLASSES	0.44205	0.19541	0.00014	-0.00049	0.18828520-01	0.01357
ITEM1N10	SATISFY PARENT'S WISHES	0.44212	0.19547	0.00006	-0.01402	0.90389530-02	0.00831
CONSTANT						1.101583	

TABLE B-3

Vocational Education: First-Semester GPA of 2.0 or Above Characteristics Only

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
MATH	MATH PLACEMENT	0.22839	0.05216	0.05216	0.22839	0.50740890-01	0.16104
ENRLST	ENROLLMENT STATUS	0.28889	0.08059	0.02843	0.21842	0.1668968	0.17510
MARST	MARITAL STATUS	0.29721	0.08834	0.00774	0.08109	0.97452610-01	0.06078
SEX		0.32299	0.09134	0.00320	-0.07663	-0.84790290-01	-0.06155
ENG	ENGLISH PLACEMENT	0.30518	0.09314	0.00160	0.16575	0.15406980-01	0.05439
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.30818	0.09498	0.00184	0.02019	0.34449970-01	0.05261
EDOBJ	EDUCATIONAL OBJECTIVE	0.30865	0.09527	0.00029	0.03009	0.18611110-01	0.01726
CONSTANT						1.044127	

TABLE B-4

Vocational Education: First-Semester GPA of 2.0 or Above Characteristics and Survey Responses

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
ENRLST	ENROLLMENT STATUS	0.22406	0.05020	0.05020	0.22406	0.1579068	0.16871
MATH	MATH PLACEMENT	0.28248	0.07980	0.02959	0.22382	0.42901390-01	0.14172
ITEM1N10	SATISFY PARENT'S WISHES	0.31980	0.10227	0.02247	-0.16184	-0.1589411	-0.12639
ITEM10	AVERAGE GRADE IN HIGH-SCHOOL	0.33647	0.11321	0.01094	0.17208	0.05804300-01	0.10945
ENTAGE	AGE GROUPINGS---ENTERING AGE	0.34596	0.11969	0.00648	0.06347	0.40985280-01	0.06616
ITEM5	CAREER PLANS	0.35300	0.12461	0.00492	0.08248	0.1192224	0.07188
ENG	ENGLISH PLACEMENT	0.35729	0.12765	0.00305	0.15323	0.13854500-01	0.04819
ITEM2N5	COLLEGE HAS COURSES	0.36219	0.13114	0.00348	0.08764	0.58057250-01	0.05789
ITEM3	FINANCIAL WORRY	0.36330	0.13199	0.00225	0.04619	0.51165800-01	0.05007
ITEM7	PRESENT EMPLOYMENT	0.36510	0.13344	0.00146	0.02861	0.34312490-01	0.03492
ITEM11N3	WRITING SKILLS	0.36652	0.13433	0.00089	0.06854	0.46793300-01	0.05005
ITEM9N4	GOT DEGREE FROM KCC	0.36742	0.13500	0.00066	-0.00586	-0.28110510-01	-0.02811
ITEM9N2	MAKE B AVERAGE	0.36819	0.13556	0.00056	0.06101	0.32352720-01	0.03288
ITEM9N1	ATTEND CLASSES	0.36825	0.13612	0.00056	-0.02590	-0.43618670-01	-0.02832
ITEM1N1	GET DEGREE-CERTIFICATE	0.36957	0.13658	0.00046	0.01281	0.25579330-01	0.02419
MARTST	MARITAL STATUS	0.37012	0.13699	0.00041	0.06332	0.47095150-01	0.02751
ITEM11N8	STUDY HABITS	0.37073	0.13744	0.00045	0.06880	-0.17397110-01	-0.01948
ITEM11N2	READING SKILLS	0.37106	0.13769	0.00024	0.05615	-0.17009800-01	-0.01861
ITEM9N3	SATISFIED WITH KCC	0.37133	0.13789	0.00020	0.02687	-0.17950610-01	-0.01817
ITEM11N1	MATH SKILLS	0.37160	0.13809	0.00020	0.07164	-0.15067470-01	-0.01704
ITEM2N7	CLOSE & CONVENIENT	0.37178	0.13822	0.00013	-0.04340	0.12123340-01	0.01217
CONSTANT						0.6670271	

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